

THIS BOX CONTAINS:

- (1) CD (your game)
- *Advanced Tactical Fighters Reference Manual* (256 pp.) which gets you up into the air and explains the physics of flight, piloting and combat. (See **How to Use** at the beginning of the manual for specific chapter information.)
- *Reference Card* (8 pp.) listing all keyboard and joystick commands in the game.
- *Install Guide* (32 pp.), which is what you're reading now. (Includes troubleshooting tips, steps for creating a boot disk and *Windows '95* information.)
- *Registration Card* — we'd love to know who you are.

ADVANCED TACTICAL FIGHTERS™ INSTALL GUIDE

Welcome to *Advanced Tactical Fighters* (ATF). This guide begins with installation instructions for people who are about to play the game for the first time. To avoid compatibility or memory problems, please take a moment to confirm that your machine matches the system requirements. The basic system requirements are listed on the bottom of the *Advanced Tactical Fighters* box. A detailed list of system requirements and recommendations are in **System Requirements**, p. 9.

Note: Disk compression of any kind will result in substantially increased load times. *Advanced Tactical Fighters* has been fully tested with Double Space and Drive Space (the disk compression utilities that shipped with MS-DOS 6.0 and later). We cannot guarantee the compatibility of our games with other disk compression utilities. For better performance, use a drive without disk compression.

PRE-INSTALLATION PROCEDURES: DOS

IMPORTANT: Follow these steps if you do not have Windows '95 installed. Before installing any piece of software, it is critical that your hard drive be in proper working order. Failure to verify this may result in corrupt data.

- 1. Type VER [Enter] from your C: prompt (C:\>).

If you are using DOS version 6.2 or later, it is extremely easy to verify your drive's condition with a few simple commands. If you are using Windows '95, please see **Pre-Installation Procedures: Windows '95**, below.

The DOS version you currently have installed will be displayed on the screen. If it says **MS-DOS VERSION 6.2** or any version later than that, follow the instructions below. If you are using DOS version 5.0, or are unable to use the commands in Steps 2 and 3, you may need to use other utilities (such as *Norton Utilities* and *Central Point Tools*) to check your drive's condition.

- 2. Type SCANDISK C: [Enter] from your C: prompt.

This determines if your drive is in good repair. If any damage is found, you should repair it before continuing. Follow the instructions in your DOS manual.

- 3. Type DEFRAG C: /F [Enter] from your C: prompt.

This runs a complete defragmentation of your hard drive to ensure all of your data is sorted properly. It also optimizes your system for faster load and access times.

PRE-INSTALLATION PROCEDURES: WINDOWS '95

Before installing any piece of software, it is critical that your hard drive be in proper working order. Windows '95 provides the disk tools SCANDISK and DEFRAG to ensure this is working correctly. Then you should create a shortcut. (You can also create a normal boot disk, but a shortcut is recommended.)

- 1. *First you should run SCANDISK.* To activate SCANDISK, left-click on the **START** button. Move the mouse up and highlight **Programs**. From Programs a new menu will come up. In that menu select **A**ccessories (usually at the top). Yet another menu will come up — within that menu select **S**ystem Tools. Finally, highlight **ScanDisk** and the program will run. Once activated, make sure there is a check mark in the **Automatically Fix Errors** box and select the hard drive to which you are installing *Advanced Tactical Fighters* (i.e., if you are installing the game on drive C:, make sure C: is highlighted). Once everything is set up correctly click **Start** to have the program scan the drive and correct any errors.
- 2. *Next, run DEFRAG.* In order to activate DEFRAG, go to **System Tools** (as in previous step). Highlight **Disk Defragmenter** and the program will run. As with SCANDISK, select the drive to which you are installing *Advanced Tactical Fighters* and left-click **OK**.

QUICK INSTALL

IF YOU'RE USING MS-DOS

- 1. Turn on your computer.
- 2. If you're in Windows, close all programs and exit Windows.
- 3. Insert the ATF CD into the CD-ROM drive.
- 4. Go to your CD-ROM drive (usually D:) and type INSTALL [Enter]. (You need 490K of conventional memory to run the install program.)

If you experience trouble, consult **Troubleshooting**, p. 23.

IF YOU'RE USING WINDOWS '95

- 1. Turn on your computer and wait for Windows to load.
- 2. Insert the ATF CD into the CD-ROM drive.
- 3. If no menu appears, double-click on *My Computer* and select the CD-ROM Drive. Double-click on the ATF icon.
- 4. Click **INSTALL** in the ATF menu.
- 5. Create an ATF shortcut icon. (See **Creating an ATF Shortcut**, pp. 20-22, for details).

TABLE OF CONTENTS

INSTALLATION.....4

READ.ME File.....4

Disk Cache Programs.....4

Starting the Install Program: Windows '95.....4

Starting the Install Program: DOS.....4

Installing the Game.....5

PLAYING FOR THE FIRST TIME.....6

 Step 1 — Video.....6

 Step 2 — Sound.....6

 Adjusting Graphic Preferences.....7

 Adjusting Sound Preferences.....8

 Set/Calibrate Control Type.....8

SYSTEM REQUIREMENTS.....9

 Memory Requirements.....9

CREATING AN MS-DOS BOOT DISK.....10

 Installing VESA-Compatible Drivers.....14

 Changing Sound Card Configuration.....14

SHORTCUTS.....20

TROUBLESHOOTING.....23

ORIGIN/EA PRODUCT SUPPORT.....27

INSTALLATION

You can install the game from DOS or through *Windows* '95. The game will not create a *Windows* '95 shortcut icon for you. See **Creating an ATF Shortcut**, p. 20, to learn how to create one.

READ.ME FILE

To view an important text file that contains last-minute changes in the game or documentation, refer to the **READ.ME File**. To view the READ.ME file, go to your CD-ROM drive (usually D:) and type **EDIT READ.ME**. After viewing the file, you can print it out by typing **COPY READ.ME PRN**. In *Windows* '95, insert the *ATF* CD into the drive and click on README when the *ATF* menu appears.

DISK CACHE PROGRAMS

Although not recommended, you can run *ATF* with a disk cache (such as recent versions of *SMARTDrive*), which may reduce the CD load time for missions. If you can't free up enough conventional memory, or don't want to use a disk cache, you can temporarily disable it by making a boot disk. (Refer to **Creating an MS-DOS Boot Disk**, p. 10, to learn how to create such a boot disk.) Reboot your computer with the boot disk in your A: drive so that you can run on a configuration that does not include a disk cache.

STARTING THE INSTALL PROGRAM: WINDOWS '95

1. Turn on your computer and wait for *Windows* to load.
2. Insert the *Advanced Tactical Fighters* CD into your CD-ROM drive.
3. Click **INSTALL** from the blue *ATF* menu screen that appears. (The *ATF* icon appears automatically when Autorun is enabled.)
4. (If menu does not appear) Autorun is not enabled. You must double-click on *My Computer*, then double-click on the *ATF* icon.
5. Proceed to Step 6 in **Installing the Game**, facing page.

STARTING THE INSTALL PROGRAM: DOS

1. Turn on your computer and wait for the DOS prompt. Some machines boot directly to *Windows*, or a different shell environment. Be sure to exit *Windows* (or other shell program), and install directly from the DOS command prompt (C:\>).
2. Insert the *Advanced Tactical Fighters* CD into your CD-ROM drive.
3. Type the name of your CD-ROM drive (usually D:), then press **[Enter]**.
4. Type **INSTALL** and press **[Enter]**. (You can run this anytime you want to re-run the install program.)
5. Proceed to Step 6 on the next page.

INSTALLING THE GAME

6. When the install program begins, you see a line of text at the bottom of the screen (or window) describing four function keys:
 - [F1]** Displays World Wide Web address and phone/fax numbers for ORIGIN Product Support. (See p. 28.)
 - [F2]** Opens a temporary DOS shell window. (Type **EXIT** to return to the installation program.)
 - [F3]** Displays your computer's specifications (the install program detects your machine speed, video card, available memory, etc.).
 - [F9]** Quits the install program and returns to DOS (or *Windows* '95)

To abort the installation at any point, press **[Ctrl][X]**.

7. Highlight one of the following music install options using **[↑]** or **[↓]**, then press **[Enter]**:
 - **INSTALL ATF WITH MIDI MUSIC** will install MIDI music on your hard drive (requires 29 MB of hard disk space). Use this if your sound card supports MIDI music, and you don't have enough space for digital music.
 - **INSTALL ATF WITH DIGITAL MUSIC** will install digital music on your hard drive (requires 61 MB of hard disk space). Use this if your sound card does not support MIDI music, or if you'd rather hear digital music.
8. Select the drive where you want to install the game (usually C:). Use **[↑]** or **[↓]** to highlight a drive, then press **[Enter]**.
9. Select a directory on the hard drive for installation:
 - To accept the default drive and directory where you want to store game files and saved games (C:\JANES\ATF), press **[Enter]**.
 - To change the drive and directory where you want to store game files and saved games, backspace over C:\JANES\ATF and type the drive and directory you'd prefer. Press **[Enter]**.

Note: If you're using a disk cache, wait a few seconds once installation is complete. This allows all information to be copied to your hard drive. Pressing a key too soon may corrupt information in the cache.

10. Highlight **VIEW README FILE** to look at the game's **READ.ME** file, which contains late-breaking game information.
11. Highlight **EXIT TO DOS** to return to DOS (or *Windows*, if running *Windows* '95).
12. To start the game:
 - (DOS) Type **ATF**. In the future, change to the game directory by typing **CD JANES\ATF** (or whichever directory you specified during installation) then type **ATF**.
 - (*Windows* '95) Double-left-click on the *ATF* shortcut icon. (To create a shortcut icon, see **Shortcuts**, p. 20.)

PLAYING FOR THE FIRST TIME

Once you start the game for the first time, a selection screen appears that lets you configure your video mode and sound/music cards as described in the following two steps. You can also adjust sound and graphic options using the menu bar.

STEP 1 — VIDEO

- Select an in-flight video mode (left-click on a line), then press OK or **Enter**. (Click the **PREV** or **NEXT** switch to cycle through pages.)
- Select a non-flight video mode (left-click on a line), then press OK or **Enter**. (Click the **PREV** or **NEXT** switch to cycle through pages.)

Higher resolutions require more processing power. Most systems run well in 640x480 mode (higher resolutions decrease frame rate). In the future, change video modes by selecting **CONFIGURE VIDEO HARDWARE...** from the **PREF** menu.

STEP 2 — SOUND

- Select the sound card that most closely matches your system. Click on a line, then press OK or **Enter**. Click the **PREV** or **NEXT** switch to cycle through pages.

The game automatically detects most sound cards, and highlights the one it thinks matches your system. The name of the recommended driver appears at the bottom of the screen.

- Type in each sound card setting. When you've entered a setting, click OK (or press **Enter**) to accept the default setting).
- Once you've chosen a sound card type, follow similar prompts to select a music card type.

Note: Some sound cards require a special setup for installation to work properly. For more information on these settings, see **Required Sound Card Lines**, p. 14, or refer to your sound card documentation.

I/O Port. 220H is the usual default setting.

IRQ. This menu gives you a choice of IRQ ports (5 is the default for all but the oldest Sound Blaster cards).

DMA. This menu gives you a choice of possible 8-bit and 16-bit DMA settings for your sound card (default setting is 1 for most Sound Blaster cards).

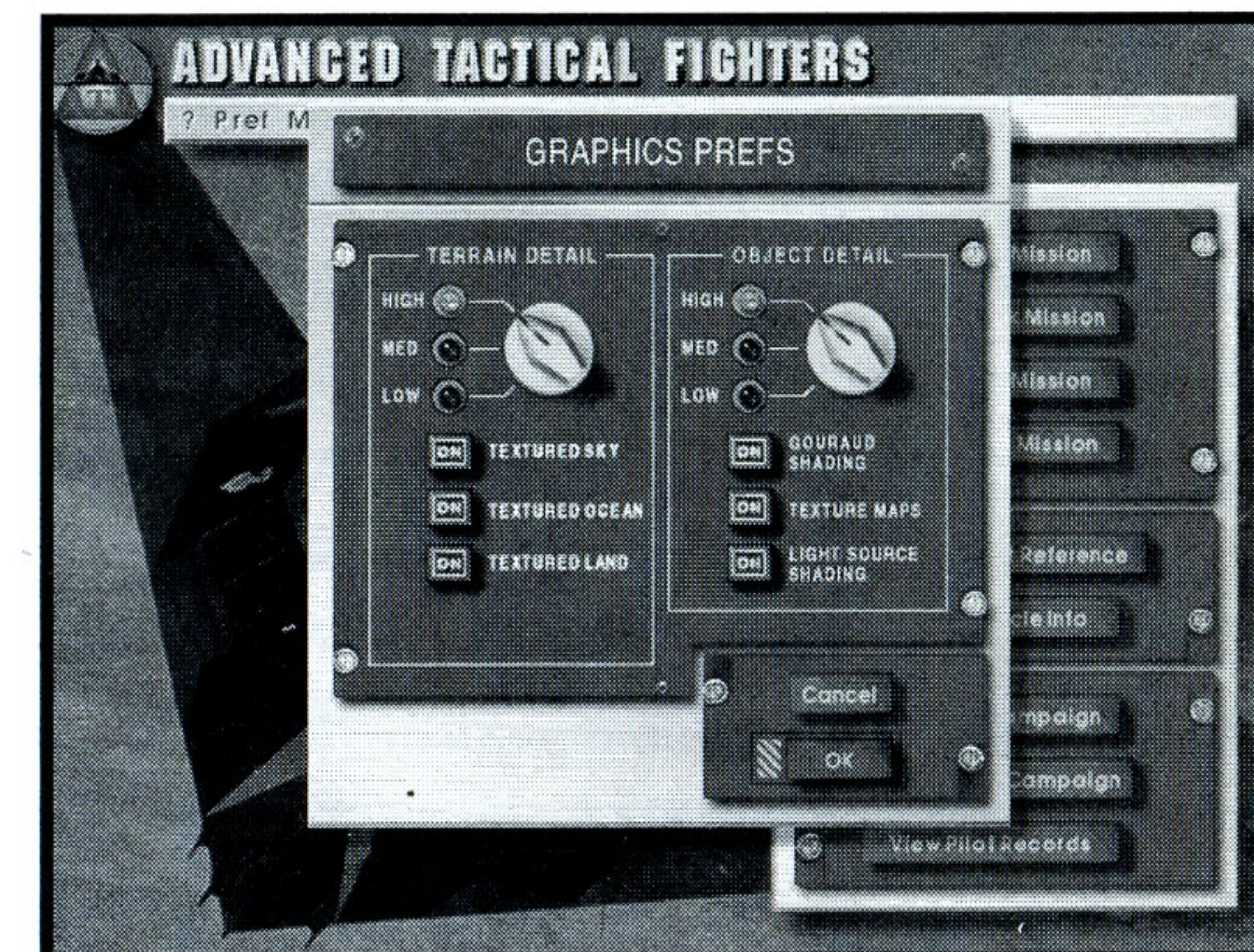
In the future, change sound drivers by selecting **CONFIGURE SOUND HARDWARE...** from the **PREF** menu.

ADJUSTING GRAPHIC PREFERENCES

From the main menu, you can adjust graphic and sound options by selecting **GRAPHICS...** from the **PREF** menu.

Terrain/Object Detail

- Select terrain and object detail by clicking **HIGH/MED/LOW** on the respective dial. (**HIGH** gives more detail, but slows down the frame rate; **LOW** has less detail, but speeds up play.)
- Click beside the boxes to activate or deactivate various options. Activating one or more of these options slows down gameplay. If you're experiencing choppy flight, try deactivating one or more options.



TEXTURED SKY

Turn sky texture and clouds on/off.

TEXTURED OCEAN

Turn water texture on/off.

TEXTURED LAND

Turn terrain texture on/off.

GOURAUD SHADING

Turn smooth shading on/off.

TEXTURE MAPS

Turn ground texture maps on/off.

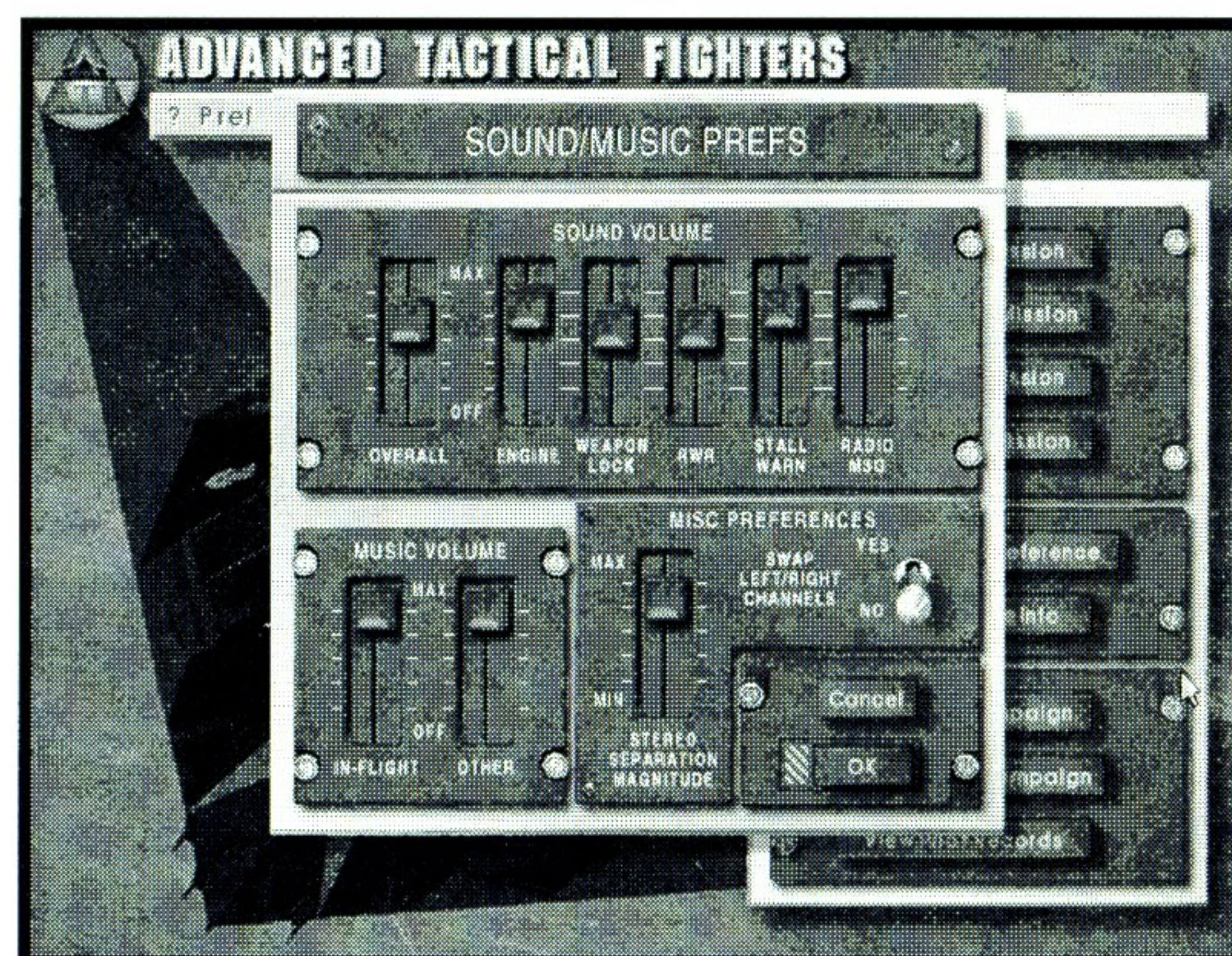
LIGHT SOURCE SHADING

Add realistic lighting effects.

ADJUSTING SOUND PREFERENCES

From the main menu, you can adjust graphic and sound options by selecting **SOUND...** from the **PREF** menu. To adjust volume, click on a red button and drag it up/down, then release. MAX is the loudest setting, MIN is the quietest.

SOUND VOLUME slider bars	Adjust sound effect volume. The top left slider adjusts overall sound effect volume; the other sliders adjust individual sound effects.
MUSIC VOLUME slider bars	Adjust the overall music volume during flight (IN-FLIGHT) or between missions (OTHER).
STEREO SEPARATION MAGNITUDE	Adjust the difference in volume between the right/left speakers during stereo sound effects. (MAX invokes the greatest difference, MIN invokes the least.)
SWAP LEFT/RIGHT CHANNELS	Reverse left/right speaker channels (this plays right-hand sound effects in the left-hand speaker, and vice-versa). Click switch to YES position to activate, NO position to deactivate.



SET/CALIBRATE CONTROL TYPE

IMPORTANT: You must have a mouse connected in order to play ATF.

The game automatically detects your joystick if one is connected. To change the flight control device:

- Select the **CONTROL** menu during flight, then select a control from the **STICK** sub-menu — KEYBOARD / JOYSTICK / THRUSTMASTER / FLIGHTSTICK PRO.
- The program will ask you whether or not you want to use the throttle on certain joystick types. Press **[Y]** or **[N]**.
- Follow the onscreen calibration instructions.

SYSTEM REQUIREMENTS

Computer. *Advanced Tactical Fighters* requires at least an IBM 486 DX/2 66+MHz or 100% compatible system, and MS-DOS version 5.0 or higher. Pentium™ machines are recommended.

Video Card. VESA-compliant SVGA (640x480). A local bus or PCI video card is required.

Hard Drive. You must have a minimum of 31 MB free on your hard drive (29 for MIDI music, 2 for save games) to install and play this game with MIDI music. You must have a minimum of 63 MB (61 for digital music, 2 for save games) to install and play with digital music.

CD-ROM Drive. You must have at least a double-speed CD-ROM drive with a transfer rate of 300,000 bytes/second or higher.

Mouse. ATF requires a Microsoft or 100% compatible mouse using Microsoft software driver version 7.0 or higher or 100% compatible software driver.

Memory. ATF uses 490K (501,760 bytes) of conventional RAM (base memory) and 6900K (7,065,600 bytes) of either extended memory (XMS) or expanded memory (EMS). You must have a minimum of 8 megabytes of RAM installed in your machine.

MEMORY REQUIREMENTS

Advanced Tactical Fighters uses conventional RAM (base memory), plus extended memory (XMS) or expanded (EMS) memory. As long as you have at least 490K available conventional memory, and at least 6900K available XMS or EMS memory, the game should run correctly. If you are unsure about any details regarding the different types of memory, consult your DOS manual.

To find out how much conventional, XMS or EMS memory you have available:

From the DOS prompt, type: **MEM [Enter]**.

When the memory information is displayed on the screen, look for the following:

- **LARGEST EXECUTABLE PROGRAM SIZE** — This number indicates how much DOS conventional memory is available. You must have at least 501,760 bytes (490K) listed here.

You must have the above listing, along with one of the following two listings:

- **TOTAL EXTENDED (XMS) or TOTAL CONTIGUOUS EXTENDED** — This is the amount of extended memory in your computer. You must have at least 7,065,600 bytes (6900K) listed here.
- **BYTES FREE OF EMS OR FREE EXPANDED (EMS)** — This is the amount of expanded memory configured for your system. You must have at least 7,065,600 bytes (6900K) listed here.

If you have only 8 MB RAM, we recommend using an XMS setup. If you have more than 8 MB RAM, you can use either an EMS or an XMS setup, but XMS is always preferable.

CREATING AN MS-DOS BOOT DISK

If you use a lot of your computer's power to do things besides run the game, it may take a little extra work to get any game running. Using *Windows* frequently, or hooking your computer up to a printer, a network, a modem, a fax machine or any sort of useful external device ties up a lot of what the game expects to be able to use.

To ensure maximum performance from *Advanced Tactical Fighters*, it is recommended that you create a boot disk that will optimize your computer specifically for installing and/or running the game. If you are experiencing problems installing and/or running *ATF* or do not have enough free memory, it will help to create a separate boot disk and decrease the number of memory resident programs (TSRs) you have loaded.

CHECKING OUT THE FOUNDATION

If you've got a computer that meets the specifications printed on the bottom edge of the box, you should be able to run the game. First, make sure your computer has everything you need. (You only need to do this if you're using an MS-DOS boot disk instead of running the game through *Windows '95*.)

1. Type **VER** Enter at the DOS prompt (C:\>).
The line MS-DOS VERSION 6.0 (or any other version as long as it is 5.0 or later) should appear. If it does, so far so good. If it gives a number less than 5, you won't be able to run the game. If you have an earlier version of DOS, you will have to upgrade before you can play *Advanced Tactical Fighters*.
2. Type **MEM** Enter.
This checks to see if you have enough memory. (See **Memory Requirements**, p. 9, for details).
3. Check that you have a 100% compatible mouse driver.
If you aren't sure, you can find your mouse driver line in your AUTOEXEC.BAT:
 - a. Type **TYPE C:\AUTOEXEC.BAT** and look for any line that includes **MOUSE** (but not **SET MOUSE**).
 - b. Write the entire line on paper.
 - c. If you can't find the line, try typing **MOUSE** Enter at the DOS prompt. If you get a line saying **MICROSOFT (R) MOUSE DRIVER VERSION** <at least 7.0>, your mouse is 100% compatible.
4. Check that you have a 100% compatible sound card. (See **System Requirements**, p. 9, and **Required Sound Card Lines**, p. 14.)

MAKING A BOOT DISK

1. Put a blank disk into your A: drive.
When your computer is turned on, it should look for your "startup" files (CONFIG.SYS and AUTOEXEC.BAT) *first* in your A: drive. If those files aren't there, it will go on to look in your hard drive. (A boot disk in your B: drive won't do any good at all; the computer will never look there.)
 2. Format the disk in your A: drive.
Even if the disk in drive A is already formatted, format it again to make sure that your current operating system is copied to it. *Do this from your C: prompt:*
 - a. Type **FORMAT A: /S** Enter.
The /s is the command that copies over your system files.
 3. Copy your CONFIG.SYS onto your boot disk:
This moves the raw material onto your boot disk, so that you can modify it without having to type in all the information that is going to stay the same — like your sound drivers.
Note: You do not want to change your hard drive's CONFIG.SYS or AUTOEXEC.BAT.
 - a. Switch to the A: drive by typing **A:** Enter.
 - b. Type **COPY C:\CONFIG.SYS A:** Enter.
 4. Modify your CONFIG.SYS:
Now it's time to take out or change all the lines that don't facilitate game play.
 - a. Type **EDIT A:\CONFIG.SYS** Enter.
You're going to want at least seven lines. Some you're going to keep as they already appear, and some you can change slightly. (Any line containing or PowerShare should be removed. It will conflict with the game.) If you have used DOS's MEM MAKER, your lines may start with /L:, followed by several numbers. If so, try to make all lines resemble the ones listed in this section.
-
- b. You should already have a line that looks similar to the one below. If it's not identical, that's fine.

```
DEVICE=C:\DOS\HIMEM.SYS
```


Some newer systems also have "plug-and-play" peripherals that use a special driver. If yours does, you'll see the following line (make it the first line in your boot disk CONFIG.SYS). If your system doesn't have plug-and-play capabilities, *do not* add this line:

```
DEVICE=C:\PLUGPLAY\DRIVERS\DOS\DWCFGMG.SYS
```


- DOS=HIGH
- c. *If you don't have one this, type it in.* It loads your DOS commands into high memory, where they won't compete with the game for room.
-
- FILES=40
- d. *If you don't have this one, type it in. If it says something other than 40, change it to 40.* This line sets how many files the game can have open at the same time. The more complex and busy the game, the more things will be happening simultaneously, and therefore the more files will need to be open.
-
- BUFFERS=40
- e. *If you don't have this one, type it in. If it says something other than 40, change it to 40.* This line allows the game to make a "holding pool" for information. Sometimes the game throws more information at your computer than your computer can deal with immediately — this sets how much information can be put "on hold."
-
- SHELL=C:\DOS\COMMAND.COM C:\DOS /P
- f. *If you don't have this one, type it in.* This line is just a note reminding your computer to look in your hard drive's DOS directory to find the system commands.
-
- DEVICE=C:\<all the information about your sound card driver, if any>
- g. *You want to keep the sound card driver line from your original CONFIG.SYS.* This is another important line to keep, because if you don't mention your sound card driver in your CONFIG.SYS, not only will your game not have sound, but it just won't play for very long. You can spot the sound card driver because it will mention your sound card (for example, if you have a Sound Blaster 16, look for "SB16"). If you can't find this line, don't worry about it — unless your game won't play.
- See **Required Sound Card Lines**, p. 14, for common sound card lines.
-
- DEVICE=C:\<all the information about your CD-ROM driver>
- h. *You want to keep the CD-ROM driver line from your original CONFIG.SYS.* This is an important line to keep, because it gets your CD-ROM working. Because you already know it works, you'll want to keep this line. It will usually be a line containing the driver name (example: SB16.SYS) followed by the device name of your CD-ROM (example: /D:MSCD001). The presence of the /D: indicates a CD-ROM driver line.
- i. Exit and save your file by typing **[Alt][F]**, then **[X]**, then **[Y]**.

5. Copy your AUTOEXEC.BAT onto your boot disk:
(This is similar to the process that you used in Step 3.)
- Go to the A: drive by typing **A:** **[Enter]**.
 - Type **COPY C:\AUTOEXEC.BAT A:** **[Enter]**.
 - Modify your AUTOEXEC.BAT:
 - Type **EDIT A:\AUTOEXEC.BAT** **[Enter]**.

You will need the following lines. One or two are going to depend on what your original AUTOEXEC.BAT reads.

-
- PROMPT \$P\$G
- b. This is the line that tells your computer to list what subdirectory you're in, and to put the ">" at the end.
-
- PATH=C:\DOS
- c. This line tells your computer how to find your DOS commands. Don't worry if you have other things after "DOS"; they can remain in the line.
-
- C:
- d. This line tells the computer to look into the correct drive for *Advanced Tactical Fighters*. If you installed to a different drive, use that letter.
-
- <The line or lines that include your mouse information>
- e. This loads your mouse, so you have the option of using it if you want to. Keep it just the way it appears in your original AUTOEXEC.BAT. The word "mouse" appearing in the line is what you're looking for.
-
- <The line that includes the MSCDEX.EXE information>
- f. You should keep this line from your original AUTOEXEC.BAT, **except** for two items: delete the /E, /S and /L parameters and change /M:## to /M:15. For example,
- C:\DOS\MSCDEX.EXE /E /M:5 /D:MSCD001
- would change to:*
- C:\DOS\MSCDEX.EXE /M:15 /D:MSCD001
-
- <all the information about your sound card driver, if any>
- g. *You want to keep the sound card driver lines in your original AUTOEXEC.BAT.*

See **Required Sound Card Lines**, p. 14, for common sound card lines.

CD\JANES\ATF

- h. This tells your computer to go to the directory where *Advanced Tactical Fighters* is located (if you did not use the default directory, replace “ATF” with the correct directory).
-
- ATF
- i. This starts the game.
-
- j. Exit and save this file by typing **[Alt][F]**, **[X]** and **[Y]**.
 7. Use your new boot disk by turning your computer off, waiting ten seconds, inserting your new boot disk in your A: drive and turning the computer back on. The boot disk should run and automatically take you into *Advanced Tactical Fighters*. (To return to your original setup, simply remove the disk from your A: drive and restart your computer.)

Note: If your boot disk doesn't work, contact **ORIGIN/EA Product Support**, p. 27.

INSTALLING VESA-COMPATIBLE DRIVERS

Advanced Tactical Fighters requires a 100% VESA-compatible SVGA driver to operate in SVGA 640x480x256-color mode. Some video cards have the necessary driver within the hardware BIOS. Customers with these cards need not load any other drivers. Other cards, however, may require a memory-resident program (TSR) to be loaded prior to the application being loaded. (The ATI Mach 32, for instance, requires VVESA.COM to enable VESA compatibility.) You must load this driver prior to running *ATF*.

If you cannot find a VESA-compatible video driver on your system, contact the card manufacturer.

CHANGING SOUND CARD CONFIGURATION

If you ever add a sound card (or change from one sound card to another), you must reconfigure the sound card configuration for *Advanced Tactical Fighters*. To change the sound driver, select **CONFIGURE SOUND HARDWARE...** from the **PREF** menu and choose a new driver. (Doing so won't harm your saved games.)

Required Sound Card Lines

The following lines are the default lines for these sound cards that should appear in your CONFIG.SYS and AUTOEXEC.BAT files. The specific parameters and directories lines for your card may vary slightly, so you should use the ones that currently exist in your CONFIG.SYS and AUTOEXEC.BAT files. If you load the SET BLASTER= environment variable, you must ensure that it is correctly set to match your sound card settings. If you have the wrong settings, you may experience lock-up. If you're unsure of your card type, contact your system manufacturer.

Creative Labs Sound Blaster

CONFIG.SYS: none

AUTOEXEC.BAT: none

Note: This card usually has all settings determined by physical jumpers on the card.

Creative Labs Sound Blaster Pro

CONFIG.SYS: none

AUTOEXEC.BAT:

SET SOUND=C:\SBPRO

SET BLASTER=A220 I5 D1 T4

Note: This card usually has all settings determined by physical jumpers on the card.

Creative Labs Sound Blaster 16

CONFIG.SYS:

DEVICE=C:\SB16\DRV\CTSB16.SYS /UNIT=0 /BLASTER=A:220 I:5 D:1 H:5

DEVICE=C:\SB16\DRV\CTMMSYS.SYS

For Vibra 16 cards, use the two following lines instead:

DEVICE=C:\VIBRA16\DRV\VIBRA16.SYS /UNIT=0 /BLASTER=A:220 I:5 D:1 H:5

DEVICE=C:\VIBRA16\DRV\CTMMSYS.SYS

AUTOEXEC.BAT:

SET SOUND=C:\SB16

SET BLASTER=A220 I5 D1 H5 P330 T6

SET MIDI=SYNTH:1 MAP:E

C:\SB16\DIAGNOSE /S

C:\SB16\SB16SET /P /Q

For Vibra 16 cards, replace the previous two lines with the following:

C:\VIBRA16\DIAGNOSE /S

C:\VIBRA16\MIXERSET /P /Q

Creative Labs Sound Blaster AWE32

CONFIG.SYS:

DEVICE=C:\SB16\DRV\CTSB16.SYS /UNIT=0 /BLASTER=A:220 I:5 D:1 H:5

DEVICE=C:\SB16\DRV\CTMMSYS.SYS

AUTOEXEC.BAT:
SET SOUND=C:\SB16
SET BLASTER=A220 I5 D1 H5 P330 E620 T6
SET MIDI=SYNTH:1 MAP:E MODE: 0
C:\SB16\DIAGNOSE /S
C:\SB16\SB16SET /P /Q
C:\SB16\AWEUTIL /S

Pro Audio Spectrum

CONFIG.SYS:
DEVICE=C:\PROAUDIO\MVSOUND.SYS D:3 Q:7 S:1,220,1,5 M:1,330,2 J:1 V:99
AUTOEXEC.BAT:
SET SOUND=C:\PROAUDIO
SET BLASTER=A220 D1 I5 T3

Note: Make sure the MVSOUND.SYS driver (see the CONFIG.SYS line above) is loaded. Copy the line as it appears in your original CONFIG.SYS setting.

Roland RAP-10

CONFIG.SYS: none
AUTOEXEC.BAT: none

Note: The I/O port and the IRQ for the RAP-10 are determined by the card itself. You must have DMA 6 available for proper operation. The RAP-10 does not provide user-configurable DMA channels and works only on DMA 6 for ATF.

Ensoniq Soundscape

CONFIG.SYS: none
AUTOEXEC.BAT (do not alter order):
SET SNDSCAPE=C:\SNDSCAPE
SET BLASTER=A220 IXX DX T1
C:\SNDSCAPE\SSINIT /I

Note: The 'XX' found in the SET BLASTER line is normal. SSINIT /I is necessary to properly enable the sound card. The switches GM, FM and MT32 are all found only on the older SSINIT executable. If the SSINIT line (last line listed above) contains one of these variables instead of /I, the drivers should be updated. Contact Ensoniq for the latest version.

ESS (Manufactured by Diamond)
CONFIG.SYS: none
AUTOEXEC.BAT
SET BLASTER=A220 I5 D1 T4
C:\DIAMOND\ESSCFG.EXE /A:220 I:5 D:1 M:5 B:330 J:E
C:\DIAMOND\ESSVOL.EXE /V:10 /L:10 /W:10 /M:0 /C:10 /S:10 /A:10

Galaxy (Standard in most Packard Bell computers. Types include Sound 144; Sound 16A; SC400; Reveal Sound F/X).

CONFIG.SYS: none
AUTOEXEC.BAT:
SET SOUND=C:\<card>
SET BLASTER=A220 I5 D1 T4
SET GALAXY=A220 I5 D1 K10 P530 T6
C:\<card>\UTILITY\SETMODE /SBP
C:\ <card>\UTILITY\VOLSET.EXE /V:16,16

Substitute <card> in the above lines as follows for your type of sound card:

<i>Sound 144</i>	SOUND144
<i>Sound16A</i>	SOUND16A
<i>SC400</i>	sc400
<i>Reveal Sound F/X</i>	MMP16P

For example, if you have a Sound 144 sound card, your set sound line would read:

SET SOUND=C:\SOUND144

Galaxy Forte 16

Use the following lines for Galaxy Forte 16 sound cards.

CONFIG.SYS: none
AUTOEXEC.BAT
SET SOUND=C:\FORTE16
SET BLASTER=A220 I5 D1 T4
SET GALAXY=A220 I5 D1 K10 P530 T6
C:\FORTE16\EMUTSR.EXE

Magic S20 (Including Magic S20; ISP 16; Mad 16; Opti930)

CONFIG.SYS:

DEVICE=C:\<card>\CDIFINIT /T:X

(Only use the above line if your CD-ROM is connected to a sound card port.)

AUTOEXEC.BAT:

SET SOUND16=C:\<card>

SET BLASTER=A220 I5 D1 T4

C:\<card>\SNDINIT /B

Substitute <card>in the above lines as follows:

Magic S20 Magics20

ISP 16 ISP16 (but change <card> in SET SOUND line to SETISP16)

MAD 16 Mad16

OPTI930 OPTI930

For example, if you have an MAD 16 sound card, your set sound line would read:

SET SOUND16=C:\MAD16

SE1440 (Standard in most NEC brand Pentium computers)

CONFIG.SYS:

Remove the following line (it goes into the AUTOEXEC.BAT instead):

DEVICE=C:\SE1440\CSACMOD1.EXE

AUTOEXEC.BAT:

SET BLASTER=A220 I5 D1 T4

C:\SE1440\CSACHMX1 /FM:L

C:\SE1440\CSACMOD1.EXE /S

DEVICE=C:\SE1440\CSACMOD1.EXE

Select SOUND BLASTER PRO OPL3 from the list of sound cards (see **Step 2 — Sound**, p. 6).

MWAV (Standard in most IBM computers)

CONFIG.SYS: none

AUTOEXEC.BAT

PATH=C:\MWD;C:\MWD\MANAGER

SET MWROOT=C:\MWD

SET LIBPATH=C:\MWD\MANAGER

SET MWPATH=C:\MWD\MANAGER;C:\MWD\MWGAMES

SET BLASTER=A220 I5 D1 T4

CALL MWGAMES ON PRO

Crystal (Common in Hewlett-Packard computers)

CONFIG.SYS:

Remove this line if it appears:

DEVICE=C:\DOSBOOT\CS4232C.EXE /O /V

AUTOEXEC.BAT:

SET SOUND=C:\DOSBOOT

SET BLASTER=A220 I5 D1 T4

OTHER STEPS:

With the above Crystal sound card lines in your system files, go to a DOS prompt, change to the root directory (by typing CD\) and type the following:

MD DOSBOOT

COPY C:\WINDOWS\CS*.* C:\DOSBOOT

CD\DOSBOOT

EDIT CS4232.INI

Now, edit this file so that it resembles the following:

[PNP]

WssIO=534

WssINT=5

WssDMAPLAY=1

WssDMACAPTURE=0

SBLO=220

OPLIO=388

OPLINT=DISABLED

GAMEIO=200

4232IO=538

4232INT=DISABLED

MPU401IO=DISABLED

MPU401INT=DISABLED

CDIO=DISABLED

CDINT=DISABLED

CDDMA=DISABLED

Save and exit by typing , then , then .

Select SOUND BLASTER PRO from the list of sound cards (see **Step 2 — Sound**, p. 6).

SHORTCUTS

When you create a shortcut, you are, in essence, creating a boot disk for the game and attaching it to an icon in *Windows '95*.

Note: *Never turn off your computer while in a shortcut. This can often cause program loops (i.e., the computer continually reboots) and other complications. To quit a shortcut, return to Windows '95 and then exit via the Shut Down option.*

CREATING AN ATF SHORTCUT

Before you start creating a shortcut, make sure that the *Advanced Tactical Fighters* CD is in your CD-ROM drive.

0. Start *Windows '95*.
1. Place your mouse cursor on an empty part of your desktop, then right-click.
2. Highlight **New**.
3. Left-click **Shortcut** from the menu.
4. In the blank command line, type C:\JANES\ATF\ATF.BAT. (If you installed to a drive other than C:, use that drive letter instead.)
5. Left-click **NEXT**.
If you want to change the name of the Shortcut, type a new name (such as "ATF Shortcut") and press **FINISH**. If not, just press **FINISH**. This places the new Shortcut icon on your desktop.
6. Right-click once on the new *Advanced Tactical Fighters Shortcut* icon.
7. Left-click once on **Properties**.
8. Left-click once on the **Program** tab.
9. Left-click in the box next to **Close on exit**. Make sure there is a check mark in the box.
10. Left-click once on the **Advanced** button.
11. Left-click once in the box next to **MS-DOS mode**. Make sure there is a check mark in the box.
12. Left-click once in the circle next to **Specify a new MS-DOS configuration**. Make sure there is a dot in the circle. (There should be two boxes under **Specify a new MS-DOS configuration**, one labeled **CONFIG.SYS** and one labeled **AUTOEXEC.BAT**)
Two windows open up — one displays CONFIG.SYS lines, the other AUTOEXEC.BAT lines.
13. Right-click inside the CONFIG.SYS FOR MS-DOS window. Highlight **Select All**, press **[Enter]** and then press **[Delete]**. Do the same for the AUTOEXEC.BAT FOR MS-DOS window. **This has no effect on the files your system uses to boot up.**

14. Start *Notepad* (under **Programs: Accessories** on the START button). Leave the *Advanced Program Settings* screen open.
15. Open your system CONFIG.SYS (or, if you cannot find it, CONFIG.DOS).
 - Click on **File**.
 - Click on **Open...**
 - Type C:\CONFIG.SYS (or CONFIG.DOS)
 - Click on the **Open** button.
16. Save this file as a temporary text document.
 - Click on **File**.
 - Click on **Save As...**
 - Type in a filename, such as TEMP.TXT. (You can delete this file later — for now, you're going to edit it and copy the contents into the Shortcut window you have open.)
17. Edit the lines in this file to match the CONFIG.SYS lines listed in **Creating an MS-DOS Boot Disk**, pp. 10-19.
Change the HIMEM line as follows:
DEVICE=C:\DOS\HIMEM.SYS
should read
DEVICE=C:\WINDOWS\HIMEM.SYS
Note: *If you have trouble finding your sound card, mouse or CD-ROM lines in your CONFIG.SYS file, look for them in CONFIG.DOS. If you still can't find the lines, contact your computer manufacturer and have them locate or install the correct drivers.*
18. When you're through editing, highlight **Select All** from the **Edit** menu, then press **[Ctrl][C]** to copy the contents of the screen.
19. Press **[Alt][Tab]** to cycle through open applications until the *Advanced Program Settings* screen displays.
20. Left-click inside the CONFIG.SYS FOR MS-DOS window.
21. Press **[Ctrl][V]** to paste the *Notepad* contents into the window.
22. Press **[Alt][Tab]** until the *Notepad* screen displays.
23. Open your system AUTOEXEC.BAT (or, if you cannot find it, AUTOEXEC.DOS).
 - Click on **File**, then click on **Open...**
 - Type C:\AUTOEXEC.BAT (or AUTOEXEC.DOS)
 - Click on the **Open** button. (Press **[N]** when it asks if you want to save changes to the temporary file you created.)

24. Save this file as a temporary text document.
 - Click on **File**.
 - Click on **Save As...**
 - Type in a filename (you can overwrite the TEMP.TXT file you created earlier).
25. Edit the lines in this file to match the AUTOEXEC.BAT lines listed in **Creating an MS-DOS Boot Disk**, pp. 10-19.
 Add the following directories to the end of the PATH line as follows:
 PATH=<directories already in this line>;C:\WINDOWS;C:\WINDOWS\COMMAND
 Change the *beginning* of the MSCDEX CD-ROM driver line as follows:
 C:\DOS\MSCDEX.EXE ... should read C:\WINDOWS\COMMAND\MSCDEX.EXE ...
Note: If you have trouble finding your sound card, mouse, or CD-ROM lines in your AUTOEXEC.BAT file, look for the AUTOEXEC.DOS extension. If you still can't find the lines, contact your computer manufacturer and have them locate or install the correct drivers.
26. When you're through editing, highlight **Select All** from the **Edit** menu, then press **[Ctrl][C]** to copy the contents of the screen.
27. Highlight **Exit** from the **File** menu to close *Notepad*.
28. Press **[Alt][Tab]** to cycle through open applications until the **Advanced Program Settings** screen displays.
29. Left-click inside the AUTOEXEC.BAT FOR MS-DOS window.
30. Press **[Ctrl][V]** to paste the *Notepad* contents into the window.
31. Edit the lines in this file to match the AUTOEXEC.BAT lines listed in **Creating an MS-DOS Boot Disk**, pp. 10-19.
32. Left-click OK.
33. Left-click **Change Icon ...**
34. Left-click **Browse ...**
35. Left-click inside the box next to *Filename* (at the bottom of the window). Type in D:\ATF.ICO, then click OK. (If D: is not your CD-ROM drive, replace it with the correct drive letter.) This places your new *ATF* shortcut icon on your desktop.
36. Double-click on this **Shortcut** icon to run the game. (Make sure you've installed the game first.)

If you've set up the Shortcut correctly, your machine will reboot and run *ATF*. If you receive an error message, or the machine returns to *Windows*, double-check the lines CONFIG.SYS FOR MS-DOS MODE and AUTOEXEC.BAT FOR MS-DOS MODE windows in the *Advanced Program Settings* screen. (To look at these windows, right-click on the Shortcut icon, then follow Steps 7-12 on p. 5.)

TROUBLESHOOTING

START-UP QUESTIONS

Q: When I type ATF to begin the game, I receive the message: "You do not have enough conventional memory to run Advanced Tactical Fighters! Please refer to your Install Guide for instructions on making a boot disk that will free a total of 490K of memory."

A1: You do not have enough free conventional memory. You need at least 490K free conventional memory, and a total of 8 MB RAM to play ATF (with at least 6900K free) to play the game. Type **MEM** at the DOS prompt or check with your computer manufacturer to ensure that you have 8 MB installed on your computer. (See **Memory Requirements**, p. 9.)

Try making a boot disk to free up more memory. See **Creating an MS-DOS Boot Disk**, pp. 10-19.

A2: You may have memory allocated to your other applications. See **Creating an MS-DOS Boot Disk** (pp. 10-19) to fix this problem.

Q: When I try to run ATF, I receive the error message: "Buffers too high. Fatal Error TNT.10013: Insufficient conventional memory for data buffers."

A: You do not have enough free conventional memory to run the game. You need at least 490K free to install the game, and 420K to play. Reduce the number of buffers specified in your CONFIG.SYS to 40 (see p. 12). Then, type **MEM** at the DOS prompt to see how much conventional memory is available (See **Memory Requirements**, p. 9.)

AUDIO QUESTIONS

Q: I have a supported sound card or 100% compatible but I am not getting any sound while playing Advanced Tactical Fighters.

A1: Make sure the digital FX setting is correct for your sound card. Check you sound card and its settings then run INSTALL from the directory to which you installed *Advanced Tactical Fighters* (or in *Windows '95*, insert the *ATF* CD into your CD-ROM drive).

A2: Make sure you have all of the necessary sound lines for your sound card loading in the CONFIG.SYS and AUTOEXEC.BAT. Refer to your sound card documentation to determine which lines are necessary for the card to work correctly. A list of the most popular cards and the lines needed to initialize them are given in **Changing Sound Card Configuration** (pp. 14-19).

A3: If your card is one of the supported cards listed in the install program, make sure you disable any emulation software you may have running. *Advanced Tactical Fighters* provides native support for these cards.

A4: If you have a 100% compatible card, check your original configuration against your boot disk configuration to make sure you have all the necessary sound card lines.

Q: I have loaded all the correct sound lines and still get an error when I run Advanced Tactical Fighters.

A: *Advanced Tactical Fighters* can only provide reliable support for those cards listed on the box and in the installation program. Other sound cards may load software that is not compatible. Consult your sound card manufacturer for more information and the latest software drivers.

MOUSE QUESTIONS

Q: When I run Advanced Tactical Fighters, I get the error message: "This program requires a Microsoft-compatible mouse. Please be sure that your mouse is connected to your computer, and your mouse driver program is loaded."

A1: Make sure your mouse is plugged in, and connected to the correct serial port.

A2: You may not be loading a DOS-based mouse driver in your AUTOEXEC.BAT or CONFIG.SYS. ATF only recognizes DOS-based drivers. Some multi-tasking environments (such as Windows '95) load their own mouse drivers, which are not compatible with ATF.

A3: Your mouse may not be 100% compatible. You need to find and load a DOS-based Microsoft mouse driver version 7.0 or higher. If you do not have a Microsoft mouse driver, contact a local hardware technician to obtain one.

JOYSTICK QUESTIONS

Q: Why doesn't my joystick work correctly?

A1: Make sure the joystick has been calibrated correctly. Before you try to recalibrate, make sure any auto-fire or turbo buttons are turned off, the trim knobs are centered and any throttle and/or other accessories are set in the "neutral" or "off" position. Then, recalibrate the joystick by selecting the **CONTROL** menu during flight, then selecting one of the following from the **STICK** sub-menu — **KEYBOARD / JOYSTICK / THRUSTMASTER / FLIGHTSTICK PRO**. Follow the onscreen instructions.

A2: You may have an active joystick port conflict. On most computers, you can find a joystick port on your sound card, your I/O serial card and also on a separate gamecard. Only one joystick port should be active; otherwise, conflicting information will be sent to the program. Consult your sound card, gamecard or I/O serial card documentation to ensure that you have only one port enabled and all the other ports disabled.

A3: You may need a speed-adjustable gamecard to fine-tune the communication between your joystick and your processor (and thus, the calibration routine). Faster processors can communicate with the joystick faster than *Advanced Tactical Fighters* expects them to. There are several types of gamecards available. Consult with a hardware technician for the type that's most convenient for you.

Q: How do I install my VFX-1 helmet (or IO glasses)?

A: Refer to READ.ME on the ATF CD, under the **VFX-1** section. You can access this file by re-running the install program (see **READ.ME File**, p. 4).

WINDOWS '95 QUESTIONS

Q: I'm running the game in Windows '95, and my sound card is not being detected or is not being detected correctly.

A: Certain sound cards are not recognized natively/correctly by Windows '95. If the correct DOS-based lines and drivers are not provided as a replacement, *Advanced Tactical Fighters* will not be able to autodetect the sound card correctly. See **Changing Sound Card Configuration** (p. 14) for more information. This may also be helped by creating a DOS boot disk (see **Creating an MS-DOS Boot Disk**, pp. 10-19) or a Shortcut to DOS (see **Shortcuts**, pp. 20-22).

Q: When I click on my Shortcut icon, my machine restarts and returns to Windows '95. Why?

A: You don't have your CD-ROM driver or mouse driver installed for DOS. Create a boot disk (see **Creating an MS-DOS Boot Disk**, pp. 10-19), or edit your *Advanced Program Settings* window for the Shortcut icon. To open the window:

- Right-click on the Shortcut icon.
- Left-click on **Properties**.
- Left-click on the **Program** tab.
- Left-click on **Advanced**.

NETWORK QUESTIONS

Q: I am trying to play a network multi-player game, but Advanced Tactical Fighters is having trouble connecting everybody.

A1: Make sure that everyone is in the appropriate multi-player screen (*Network Connection* screen). Also, make sure that everyone chooses the same **NUMBER OF PLAYERS** and the same **GROUP ID**.

A2: Ensure that all players have pressed **CALL** or **ANSWER**.

A3: *Advanced Tactical Fighters* can connect up to 8 network players for any one gaming session. Make sure everyone who wants to connect is loading the appropriate DOS network drivers. If you do not have them, see your network administrator.

A4: For more multi-player game details, see **Multi-Player Games**, pp. 1.18-1.28, in the *Reference Manual*.

MODEM QUESTIONS

If both computer systems are using high-speed serial cards, then any baud rate will work for modem play. Also, a 16550 Alpha UART chip is recommended for any connection. Any card with a chip slower than that (8250 or 16450 UARTs) requires you to choose slower baud rates or play without sound effects.

Q: What is a 16550A UART chip and do I need one?

A: UARTs are chips on a serial port that convert byte-wide (character) data into bit-wide (serial) data before it gets sent through a modem. 16550A UARTs have two 16-byte buffers (called FIFOs) that hold characters until the computer is ready to remove or transmit the data in the buffer. 8250 and 16450 UARTs only have 1-byte buffers, which cannot store as much information.

The 16550A chip is most useful under multi-tasking operating systems. It does not transfer information any faster, but it does prevent data from being lost. If your system performance drops drastically when you transfer files across your modem, or if you receive *FIFO overrun* messages while in a DOS application, a 16550A chip may be helpful. It will also drastically improve your modem performance while playing *ATF*.

Q: I'm playing over a modem or null modem connection. Why does the game seem to pause randomly?

A: On systems with slow UART chips (such as the 16450 and 8250), try playing with a lower baud rate selected, or try turning off sound effects in the game. This should reduce the pausing. (See the previous questions for more details.)

Q: I am trying to play a modem multi-player game, but I can't get my modem to connect.

A1: Make sure that you've chosen the correct settings for your modem. See **Modem Play**, p. 1.21, in the *Reference Manual*, or refer to your modem documentation.

A2: Make sure that one player presses ANSWER, and that the other player presses CALL. If you both choose the same button, the modems will not connect.

OTHER COMMON QUESTIONS

Q: The game runs slowly and/or occasionally locks up.

A: You may be loading software that is not compatible with *ATF*. First try running the game from a boot disk. Refer to **Creating an MS-DOS Boot Disk** (pp. 10-19) for more information.

Also, you may not meet all of the system requirements. Refer to **System Requirements** (p. 9) to check this possibility.

Q: When playing the game, sometimes the game crashes with the error message: "Critical error on file : <filename>". What's wrong?

A: *Advanced Tactical Fighters* is having a problem reading the CD. This can be attributed to a configuration problem, outdated CD-ROM drivers, dirt/dust on the surface of the CD, or a physically damaged CD.

Q: My game crashes when I run ATF through Microsoft Windows or Windows NT, IBM OS/2, Desqview or Windows '95.

A: Multi-tasking environments such as these often conflict with *ATF* in their memory usage and other system resources. If you experience difficulty, we recommend that you make a boot disk and run with MS-DOS. Refer to **Creating an MS-DOS Boot Disk** (pp. 10-19) to fix this problem.

Q: Advanced Tactical Fighters still doesn't work after I made a boot disk and tried the other options in this guide.

A: Copy down the exact error code and information the computer displayed and/or an exact description of the problem. Then see **ORIGIN/EA Product Support**, below.

ORIGIN/EA PRODUCT SUPPORT

If, after reviewing **Troubleshooting**, you are still having a problem with the *Advanced Tactical Fighters* software, please read this section and call us. We have a staff of product support technicians ready to help you with any problems you may encounter with the game. Today's PCs run with millions of different hardware and software combinations. Because of this, you may also have to refer to your computer dealer, hardware manufacturer or system software publisher in order to properly configure their product to run with our game. When you do call us, if at all possible, be near your computer. If it is not possible to be near your computer, be sure to have the following information:

- **Error message that displayed when the problem occurred**
- Contents of your CONFIG.SYS and AUTOEXEC.BAT files
- Listing of your machine's type and hardware contents
- DOS version number and publisher that you are currently running
- Type and version of mouse driver you use
- Type and speed of your CD-ROM drive
- Contents of a CHKDSK and MEM /C statement
- The brand of your sound card, and its IRQ, I/O address and DMA setting
- The brand of your video card and version of VESA-compliant video driver

PRODUCT SUPPORT MUST HAVE THIS INFORMATION IN ORDER TO EFFICIENTLY SOLVE ANY PROBLEMS.

Contact ORIGIN Product Support at (512) 434-HELP (434-4357), Monday through Friday, between 9 a.m. and 1 p.m., or 2 p.m. and 5 p.m., Central time (1 p.m. to 4 p.m., Friday afternoons). The ORIGIN fax number is (512) 795-8014.

You can also contact Electronic Arts Technical Support at (415) 572-ARTS Monday through Friday between 8:30 a.m. and 4:30 p.m., Pacific time. The Electronic Arts fax number is (415) 286-5080.

ONLINE SERVICES & BULLETIN BOARDS

Many of the most popular online services provide access to ORIGIN company news, product updates, release dates, technical support and game hints. In addition, ORIGIN has established its own electronic bulletin board as a customer service.

America Online. You can e-mail Customer Support at ORIGIN CS or Marketing at OSI. For Electronic Arts Technical Support, you can e-mail ELECARTS@aol.com. To reach our Customer Support board in the Industry Connection, press **[Ctrl][K]** for "Go to Keyword." Then type ORIGIN in the Keyword window. In addition to reading messages, you can download files from the "Origin Software Library." For membership information and a free starter kit, you can call America Online toll-free at 1-800-827-6364.

CompuServe. To reach our Customer Support board in the Game Publishers Forum, type GO GAMAPUB at any "!" prompt. Then select the Origin Section (Section 12). In addition to reading the messages, you can download files from the "Library Files" menu. To reach our Customer Service department by e-mail, our address is 76004,2612 (or you can post a message in the Origin Game Publishers' Section). You can reach ORIGIN Marketing at 71333,136. The Electronic Arts e-mail address is 76004,237. For membership information and a free starter kit, you can call CompuServe toll-free at 1-800-848-8199 and ask Representative #361 for your free introductory membership and \$15 usage credit.

ORIGIN BBS. The ORIGIN BBS is located in Austin, Texas and has a modem support of: 300/1200/2400/9600/14,400 bauds with N,8,1. It is operational 24 hours a day, 7 days a week. Full support is provided. Call 1-512-346-2BBS (2227) to contact. No membership is required and the only cost is any long distance charges that you may incur.

Internet. You can e-mail technical support and upgrade questions to ORIGIN Customer Support at support@origin.ea.com. The Electronic Arts technical support e-mail address is support1@ea.com. You can also retrieve demos, patches, press releases and screen shots from ORIGIN and Electronic Arts' anonymous FTP site at ftp.ea.com.

World Wide Web. Please access the ORIGIN World Wide Web site at <http://www.ea.com/origin.html>. Or, stop by Electronic Arts' web page at <http://www.ea.com>.

WARRANTY

LIMITED WARRANTY

Electronic Arts ("EA") warrants to the original purchaser of the computer software product, for a period of ninety (90) days from the date of original purchase (the "Warranty Period"), that under normal use, the media and the user documentation are free from defects in materials and workmanship.

WARRANTY CLAIMS

To make a warranty claim under this limited warranty, please return the product to the point of purchase, accompanied by proof of purchase, your name, your return address, and a statement of the defect. **OR** send the compact disc(s) to us at the address below within 90 days of purchase. Include a copy of the dated purchase receipt, your name, your return address, and a statement of the defect. EA or its authorized dealer will replace the product and return it to you (postage prepaid) or issue you with a credit equal to the purchase price.

To replace defective media **after** the 90-day warranty period has expired, send the original disk(s) to the address below. Enclose a statement of the defect, your name, your return address, and a check or money order for \$7.50 per replacement compact disc.

The foregoing states the purchaser's sole and exclusive remedy for any breach of warranty with respect to the software product.

LIMITATIONS

This warranty is in lieu of all other warranties and no other representations or claims of any nature shall be binding on or obligate Electronic Arts. Any implied warranties applicable to this software product, including warranties of merchantability and fitness for a particular purpose, are limited to the ninety (90) day period described above. In no event will Electronic Arts be liable for any special, incidental, or consequential damages resulting from possession, use, or malfunction of this Electronic Arts software product.

Some states do not allow limitations as to how long an implied warranty lasts and/or exclusions or limitations of incidental or consequential damages so the above limitations and/or exclusions of liability may not apply to you. This warranty gives you specific rights, and you may also have other rights which vary from state to state.

NOTICE

Electronic Arts reserves the right to make improvements in the product described in this manual at any time and without notice.

This manual and the software described in this manual are copyrighted. All rights are reserved. No part of this manual or the described software may be copied, reproduced, translated, or reduced to any electronic medium or machine-readable form without the prior written consent of Electronic Arts, P.O. Box 7578, San Mateo, California 94403-7578, Attn: Customer Support.

Reference work from Jane's Library: ©1996 Jane's Information Group Limited. Jane's is a registered trademark of Jane's Information Group Ltd. Software and other materials, ©1996 Electronic Arts. Advanced Tactical Fighters is a trademark of Electronic Arts. All rights reserved.

ADVANCED TACTICAL FIGHTERS CREDITS

(in alphabetical order)

SOFTWARE DEVELOPMENT

<i>Executive Producer</i>	Paul Grace
<i>Product Managers</i>	Frank Gibeau, Albert Penello
<i>Associate Producer</i>	Steve Matulac
<i>Assistant Producer</i>	Phil Engstrom
<i>Technical Director</i>	Scott Cronce
<i>Game Design</i>	Andre Gagnon, Brent Iverson
<i>Software Engineering</i>	Scott Cronce, Nicholas Fullagar, Andre Gagnon, David Howell, Brent Iverson, Jeff Lefferts, Duncan Meech
<i>Multi-Player Engineering</i>	Nicholas Fullagar, Brent Iverson
<i>Game Scenarios</i>	Phil Engstrom, Ed Gwynn, David Howell, Bob Lionel, David Luoto, Steve Matulac, Lance Stites
<i>Content Artists</i>	Andre Gagnon, David Luoto
Art and Sound	
<i>3-D Shape Artists</i>	Nick Corea, David Howell
<i>2-D Artists</i>	Laura Bowen, Connie Braat, Nick Corea, Gary Martin, Susan Pike
<i>Music & Sound Effects</i>	The Fat Man: George A. Sanger, David Govett, Adam Holzman, Joe McDermott, K. Weston Phelan
<i>Additional Digital Music</i>	Paul Baker, Joe Basquez
<i>Jane's Cinematic</i>	Paul Stankiewicz
<i>Jane's Cinematic Music and Foley</i>	Paul Baker, Stan Nuevo
<i>ATF Cinematic</i>	Gary Martin, David Mosher, Brad Pollard, Michael Shirley
<i>ATF Cinematic Music, Sound Effects</i>	Bing Bingham, Mark Farley, Ken Felton, Rob Hubbard
<i>ATF Cinematic Voiceover</i>	Pat Hagan, Tom Chantler
<i>Video Producer</i>	Bing Bingham
<i>Video Narration</i>	Tom McKeon
<i>Video Editor</i>	Steve Consentino

<i>Video Off-line/On-line Editing Services</i>	Consentino Films and Video Productions
<i>Photographic Source & Services</i>	Check Six Inc, Putnam Photo Labs
<i>Studio-Audio Services</i>	Bingham Music
<i>Media Contributors</i>	Major Alvina Mitchell, MSgt Mary Stowe; USAF Media Relations Division, Office of Public Affairs; Dept. of Defense Motion Media Records Center; Dept. of Defense Advanced Research Projects Agency; Office of Defense Cooperation, French Air Attache; Dassault Aviation, Luc Berger, in Charge of Information; Lockheed Advanced Development Co.; Boeing Defense & Space Group, Military Airplanes Division; Northrop Grumman Advanced Technology and Design Center; B-2 Public Affairs, Northrop Grumman; Rockwell North American Aircraft; NASA; Dryden Flight Research Center; GE Aircraft Engines; Charles Mott, Flying Tigers Association; Lockheed Martin Aeronautical Systems Corp.; Pratt & Whitney.
<i>Cobra Video Player</i>	Jeff Litz
<i>Video Lab Assistance</i>	Eric Kornblum, Michael Marsh, Jerry Newton
<i>Additional Voiceover</i>	Cinco Barnes
<i>Customer Service Supervisor</i>	Marie Williams
<i>QA Supervisor</i>	Evan Brandt
<i>QA Project Leader</i>	Mark Franz
<i>QA Assistant Project Leader</i>	Dustin Cryer
<i>QA Translations Liaison</i>	Jeffrey Morris
<i>QA Testers</i>	Lee Gibson, Bob Lionel, Scott Loyd, Grant McDaniel, Courtney McMillan, John Moreland, Gabe Nickelson, Jonathan Piasecki, Michael O'Reilly, Drei Rendsland, Lance Stites, Kirk Watson, Greg Wilson

GAME MATERIALS

Package Art Direction

Nancy Waisanen

Package Design

13th Floor

Package Photography

Check Six (George Hall), Liason International
(Ron Richards), Image Bank (Alan Becker)

*Documentation**

Tuesday Frase, Jennifer Spohrer

Editing

David Ladyman, Tuesday Frase,
Jennifer Spohrer

Document Translation

Frank Dietz, Monique Quirk

Lead Documentation Designer

Catherine Cantieri

Documentation Design

Susan Bednar, Kevin Hanson, Valerie Horne

Documentation Art

Adrian Bourne, Lisa Undercoffler (USNF art);
Catherine Cantieri, Wendi Dunn,
Lisa Goodrich, Kevin Hanson, Jennifer Spohrer

Specifications

Jane's Information Group, Sally Velthaus,
Allison Volmer

Special Thanks

Jane's Information Group, EAC's QA Tech
Team, Bob Hutchenson; Thompson Enterprises,
Charlie Lillis; Grumman Aircraft Corporation,
NASA; Waiters on Wheels Inc. for their
delivery service.

Very Special Thanks

Wives, families, partners, friends and pets for
support and understanding, Incan monkey gods
and the makers of Crack™ for inspiration.

* Some material based on the original *U.S. Navy Fighters* manual.